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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,900	03/01/2004	Joseph Stephen Williamson	OMS027/152174	2620
23444	7590	03/17/2006	EXAMINER	
ANDREWS & KURTH, L.L.P.			DUNWOODY, AARON M	
600 TRAVIS, SUITE 4200			ART UNIT	
HOUSTON, TX 77002			PAPER NUMBER	

3679

DATE MAILED: 03/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/790,900	WILLIAMSON ET AL.	
	Examiner	Art Unit	
	Aaron M. Dunwoody	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/1/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/1/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

No priority claimed.

Information Disclosure Statement

The information disclosure statement filed 1/30/2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

The information disclosure statement (IDS) filed 3/1/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to show the pin base cross section CS_{PN} being about fifty percent smaller than the box counterbore cross section CS_{BC} (i.e., Figure 2) as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent 6244631, Payne et al in view of US patent 2885225, Rollins.

In regards to claim 1, Payne et al disclose a double shoulder connection joint for use in a drill stem, having a pin (14) with external threads formed between a pin external shoulder and a pin face, a box (16) with internal threads formed between a box external shoulder and a box internal shoulder, the box having a counterbore section between the internal threads and the box external shoulder, the pin having a base

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section between the external shoulder and the external threads, and a nose section between the external pin face and the external threads, the internal threads and the external threads are arranged and designed for connection with each other so that the box and the pin are connected with a common center-line (any convenient line) and with a primary seal formed by the pin external shoulder forced against the box external shoulder and a secondary shoulder formed by the pin face forced against the box internal shoulder, and wherein the connection joint is characterized by, the internal threads and the external threads having a thread taper with respect to the center-line. Payne et al do not disclose the center line being greater than a thread taper lower of 1.0 inch per foot, and which is less than an upper limit upper of 1.2 inch per foot. Rollins teaches a center line being greater than a thread taper lower of 1.0 inch per foot, and which is less than an upper limit upper of 1.2 inch per foot, because a taper less than 1.0 inch per foot will produce excessive wedging action in the stabbing the connection together (col. 2, lines 5-11). As Rollins relates to drill pipe connections, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a center line greater than a thread taper lower of 1.0 inch per foot, and which is less than an upper limit upper of 1.2 inch per foot, because a taper less than 1.0 inch per foot will produce excessive wedging action in the stabbing the connection together, as taught by Rollins.

In regards to claim 2, Payne et al in view of Rollins disclose thread form characteristics of pitch, thread major diameter, and thread pitch diameter are arranged and designed so that less than 8 turns are required from stabbed to snugged.

In regards to claim 3, Payne et al in view of Rollins disclose the turns required from stabbed to snugged is about 6 turns with a thread taper of about 1.125 inch per foot.

Claims 4-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Payne et al in view of Rollins as applied to claims 1-3 above, and further in view of US patent 6447025, Smith.


In regards to claims 4-37, Payne et al in view of Rollins disclose the claimed invention except for the external and internal threads are characterized by a thread depth, measured between a major radius and a minor radius, is about one-half or less of the of height of a fundamental triangle of the threads. Smith teaches the external and internal threads characterized by a thread depth, measured between a major radius and a minor radius, is about one-half or less of the of height of a fundamental triangle of the threads to improve the threaded tubular connection. As Smith relates to oilfield tubular threaded connections, it would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the external and internal threads with a thread depth, measured between a major radius and a minor radius, is about one-half or less of the of height of a fundamental triangle of the threads to improve the threaded tubular connection, as taught by Smith.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron M. Dunwoody whose telephone number is 571-272-7080. The examiner can normally be reached on 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Aaron M Dunwoody
Primary Examiner
Art Unit 3679

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